



Roger Batzel

(1922–2000)

A Career of Distinguished

*With the full confidence of
employees and Congress,*

Lawrence Livermore Director

Roger Batzel

Achievement

presided over nearly 17 years of

unprecedented growth and

remarkable accomplishments.

NUCLEAR chemist, presidential adviser, and accomplished square dancer, Roger Elwood Batzel redefined what a national laboratory could be during his tenure as director of Lawrence Livermore National Laboratory. Batzel died on July 29, 2000, at the age of 78, to the great sorrow of countless friends and colleagues.

Batzel was director from 1971 to 1988, or nearly one-third of the Laboratory's history. For almost 17 years—by far the most for a Lawrence Livermore director—he presided over enormous technical achievements that contributed greatly to the eventual end of the Cold War. In the process, he demonstrated that a quiet, self-effacing manner was no obstacle to greatness in leadership or to earning the genuine affection and respect of colleagues and senators alike.

“Roger shepherded the Laboratory through a time of great growth and transition from a defense and nuclear facility to a multiprogram institution dedicated to solving the important scientific issues of our time,” says Lawrence Livermore Director Bruce Tarter. From fiscal year 1971 to 1988, Lawrence Livermore's total operating, equipment, and construction budget climbed more than twofold to over \$1 billion. At the same time, the full-time staff rose from 5,300 to 8,200, about what it is today.

Laboratory Associate Director Emeritus Phil Coyle, who served as Batzel's executive officer for several years, notes that the concept of a multiprogram laboratory, one that pursued excellence in applied research in many different fields, blossomed to its full potential under Batzel. Nonweapons work grew to account for about 40 percent of the Laboratory's budget. Energy projects included coal gasification, oil-shale retorting, geothermal energy, advanced battery research, solar energy, and fusion energy.

During the 1970s, scientists built a series of increasingly powerful lasers, including Shiva, and began to

develop laser isotope separation technology for enriching uranium. Biomedical and environmental work, including nuclear waste storage technology, expanded significantly. The Laboratory gained expertise to analyze seismic events, and research in atmospheric sciences and global climate modeling grew.

National Security Advancements

Although the 1970s saw reduced federal funding for defense, Laboratory weapons scientists made significant achievements, including the successful underground nuclear test of the Spartan antiballistic missile at Amchitka, Alaska. Weapons support facilities such as diamond-turning machines for unprecedented machining accuracy were built at Livermore. Increases in computational capabilities led to major improvements in simulating weapon

performance and other physics phenomena in extreme environments.

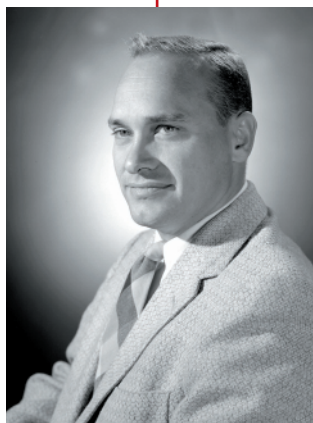
During the Reagan administration, from 1980 to 1988, the Laboratory saw funding for energy and the environment decline and support for national security climb significantly. New weapons projects for Laboratory scientists included warhead designs as well as research on ballistic missile defense, which included particle beams, free-electron lasers, x-ray lasers, and Brilliant Pebbles, part of the strategic missile defense initiative. New research facilities such as the Advanced Test Accelerator and the Flash X-Ray Facility—the latter a key component of today's Stockpile Stewardship Program—were also built.

Computer modeling affected nearly all fields, providing a foundation for its essential role today. The Laboratory's Atmospheric Release and Advisory Capability tracked the Chernobyl

radioactive cloud, and combat simulation programs designed at Livermore became vital training tools to the military. A new generation of supercomputers allowed Laboratory scientists to significantly improve simulating weapons and other phenomena with advanced codes.

Laser research expansion continued aggressively. The 10-arm Nova laser debuted in 1985 as the world's largest. Successful plasma and implosion experiments over the next decade pointed the way to the giant 192-beam National Ignition Facility, now under construction at Lawrence Livermore. Biomedical research made major strides in genetics, biodosimetry, and other areas and laid the groundwork for the Laboratory's major role in the Human Genome Project.

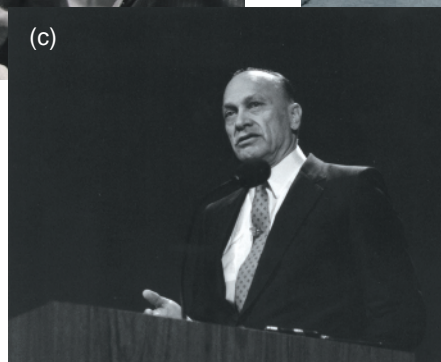
Laboratory Director Emeritus Edward Teller credits Batzel with



In 1959, Batzel was appointed head of the Chemistry Department.



(a) With Vice President Nelson Rockefeller in 1977, (b) with Dixie Lee Ray, Director of the Atomic Energy Commission, in 1973, and (c) during one of his annual State of the Laboratory presentations.



positioning Lawrence Livermore to help the nation win the Cold War through research in support of the Strategic Defense Initiative, specifically the development of Brilliant Pebbles. “Roger Batzel fought and won the Cold War when the battle had to be fought. His contributions to the nation are just as important as those of E. O. Lawrence or Robert Oppenheimer,” says Teller.

Kept Up to Date on Research

Batzel made sure he was current on research programs, both large and small. Jack Kahn, who served as Batzel’s deputy director for many years, cites his “extraordinary grasp” of Livermore’s widely diverse research efforts, including programs such as biomedicine and fusion energy that were not immediately related to his specialty of nuclear chemistry.

Duane Sewell, who also served under Batzel as deputy Laboratory director, notes that when Batzel visited scientists around the Laboratory to learn more about their research, they would often marvel that “this guy knows a lot about my experiment.”

“I make sure I understand what’s going on in the various parts of the weapons program, in magnetic fusion energy, in the laser area, in energy and biomed,” Batzel said in the mid-1980s. “That is a challenge in its own right, one which gives me a great deal of satisfaction.”

Batzel started two programs that strengthened overall research. The first, a formal postdoctoral program, broadens the training for individuals who recently received a Ph.D. and is, today, a vital part of Lawrence Livermore’s multidisciplinary research efforts. The second evolved into the

current Laboratory Directed Research and Development program of independent research, which Livermore Director Emeritus Michael May terms “a great asset to the Laboratory and to science in general.”

Batzel’s directorship was also marked by important progress in people issues. Educational programs, in particular, blossomed. Lawrence Livermore scientists visited local schools and devised math and science lesson plans designed to capture the imagination of schoolchildren and teachers alike. Batzel strengthened educational assistance for employees and greatly expanded collaborations with universities and other laboratories. Interactions with industry and local communities and government agencies soared. The Visitors Center debuted as one of many outreach efforts.



In 1982, Batzel received the Distinguished Associate Award from W. Kenneth Davis, Deputy Secretary of Energy. The award citation said Batzel “has proven to be a catalyst for success through his technical insight and his management style that fosters creativity and the pursuit of excellence.”



Batzel enjoyed the confidence of congressional representatives and senators, including Senator John Glenn.

Batzel counseled his successor, John Nuckolls, shortly after he stepped down as the Laboratory’s sixth director. (At the far right is Carl Haussmann.)



Transformed Social Fabric

Kahn says that Batzel did not receive enough credit for helping to transform the social fabric of the Laboratory, from a top-down structure characteristic of the 1950s and 1960s to a more egalitarian structure that encouraged two-way communication. “Roger was a true agent of change,” he said.

Discussions about Batzel’s directorship typically turn into fond recollections of Roger Batzel the man. Mort Mendelsohn, whom Batzel convinced to take over the biomedical

research program in 1972 (see related article on pp. 10–13), described him as a “tall, lanky, cowboy-booted man” who was also a “superb manager.” He was, Mendelsohn says, “the Gary Cooper of the nuclear world. Roger was a man of few words, but he had the strongest convictions.”

Sewell characterizes him as “calm, thoughtful, and very caring about people.” He says that Batzel had the confidence of Laboratory employees as well as Congress “because he was such a quiet, kind, and good individual.”

Sewell says that Batzel “was not what I would call a flamboyant or dynamic leader. But he got things done.” He adds, “When he spoke to you, you listened.” Sewell, the Laboratory’s deputy director emeritus, continued to share an office with Batzel until his death. “He was a wonderful man who touched my life,” he says.

Coyle cites Batzel’s influence on Washington contacts. “He had a way of reassuring any customer, whether it was the Navy, Department of Defense, or whoever, that when the Lab took on a

An American Success Story

Roger Batzel’s life was “an American success story,” says Lawrence Livermore Director Emeritus Michael May. He cites Batzel’s steady rise from modest beginnings in Weiser, a small town in Idaho where he was born and reared. In the midst of World War II, he left his studies at the University of Idaho and joined the U.S. Army Air Force, where he served as a navigation instructor. After the war, he returned to the University of Idaho, earning his bachelor’s degree in chemical engineering in 1947.

His first job after college was as a chemist with General Electric Company’s Hanford facility in Richland, Washington. In 1948, he left to attend the University of California at Berkeley, studying under famed nuclear chemist Glenn Seaborg. After receiving his Ph.D. in 1951, Batzel spent two years as a senior chemist with the California Research and Development Corp., which as a contractor for the Atomic Energy Commission conducted defense research at Lawrence Livermore’s current site.

He joined Lawrence Livermore as an assistant division leader with the Chemistry Department in 1953, a year after the Laboratory opened its doors. His work involved the radiochemical analysis of nuclear-device performance. Batzel became Chemistry department head in 1959 and associate director of Chemistry two years later. His responsibilities increased significantly shortly after when he was also named associate director of Nuclear Testing, a position he held until 1964.

He went on to serve as associate director of Chemistry and Space Reactors from 1966 to 1968 and associate director of Chemistry and Biomedical Research from 1969 until his appointment as the Laboratory’s sixth director on December 1, 1971, his 50th birthday.

He served as director until early April 1988. “I have found challenge, stimulation, and satisfaction in my position,” Batzel said.

An inscription on a plaque, presented to Batzel by John Nuckolls, Batzel’s successor, cites Batzel’s “vision and leadership during the years of growth and diversification that have made Livermore an internationally esteemed center of excellence for defense, energy, and biomedical and environmental science and technology.”

Nuckolls appointed him associate director-at-large. In that position, he served on the Laboratory’s Executive and Weapons committees and oversaw the Intelligence Program. Although he retired in 1989 as director emeritus, he still kept a desk in the Director’s Office and worked on a regular basis as a consultant.

Batzel was a fellow of the American Physical Society and the American Association for the Advancement of Science. He received the esteemed Distinguished Associate Award, the Department of Energy’s highest award, in 1982.

On September 30, 2000, two months after Batzel’s death, longtime friends, family members, and former colleagues gathered for a special tribute hosted by current director Bruce Tarter. Three former directors—Mike May, Edward Teller, and John Nuckolls—attended, as did many other current and former senior Laboratory managers. Joining them were Edwina (Eddy) Batzel, Batzel’s wife of 54 years, daughters Stella and Stacy, and grandsons Chris and Sam. Batzel’s son Roger could not attend.

Following the ceremony, Tarter announced that the Laboratory would dedicate Building 132, the national security building, in Batzel’s memory for his “legacy of excellence in support of national security.”

job, the best people would be assigned and those projects would be successful—always.”

John Nuckolls, who succeeded Batzel as director, says “Roger had special strengths and resources that facilitated Livermore’s evolution into the nation’s leading applied science laboratory. He created and led a team of extraordinary senior scientist-managers. He gave our national security programs top priority. His strong support never wavered, notably during the major controversies related to our leading Strategic Defense Initiative program when it was criticized by the scientific community and investigated by Congress.

“Roger followed Lawrence’s example (as characterized by Edward Teller), ‘generously supporting all who had the ability and determination to take a step forward.’ Each of us who personally experienced this generous support has an enduring appreciation for Roger’s leadership.”

Built Home for Leaders

“Roger built a home for colorful, creative leaders,” says Coyle, who is

presently Director, Operational Test and Evaluation in the Department of Defense. “It was a rainbow of talent that any institute would treasure.” He adds, “Roger had the ability to support diverse programs and talents so each person felt like part of a whole.” The accomplishments that Batzel nurtured, Coyle says, “thrive to this day.”

Despite his crowded schedule and frequent trips to Washington, Batzel spent as much time as possible with his family—his wife Edwina and their three children, Stella Lynn, Roger Jr., and Stacy. The Batzels’ recreational pursuits included horseback riding, swimming, skiing, vacations at the family home in Idaho—and, of course, square dancing.

Daughter Stella, who was born the day Batzel joined the Laboratory in

1953, recalls how her father always took her phone calls, even when he was meeting with important visitors. “I never felt like an inconvenience,” she says. “The mark of a good manager is not how he treated the special people, but how he made everyone feel special.”

For Director Bruce Tarter, “Roger left as his legacy a strong and diverse Lab, and he continued to provide advice and counsel during the past decade. He will be missed.”

—Arnie Heller

Key Words: Advanced Test Accelerator, Atmospheric Release and Advisory Capability, biodosimetry, biomedical research, Brilliant Pebbles, DOE Distinguished Associate Award, Flash X-Ray Facility, Laboratory Directed Research and Development program, Nova laser, postdoctoral program, Roger Batzel, Spartan antiballistic warhead.

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Lawrence Livermore National Laboratory